

# Medical Technology Transfer

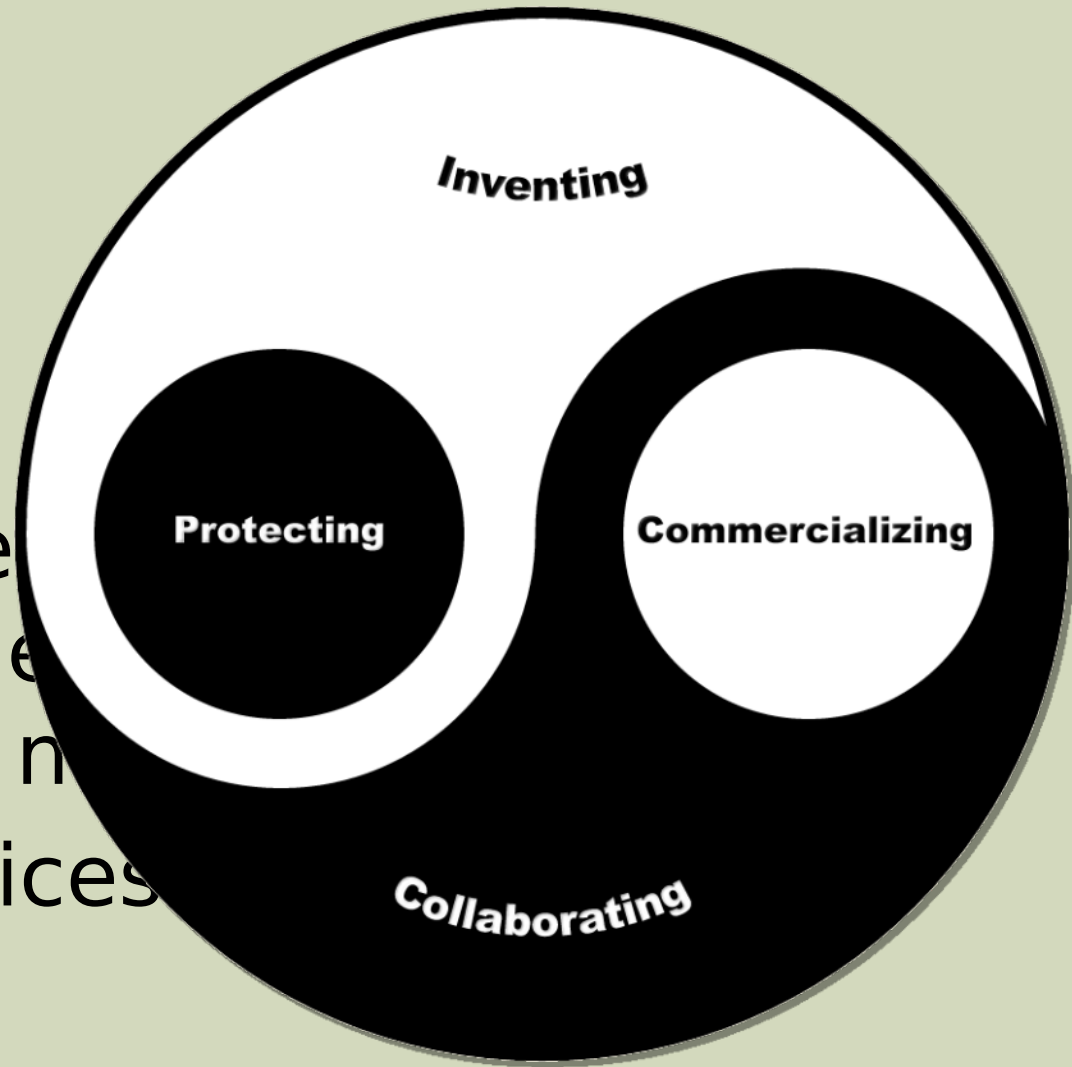
Product Development and Commercialization  
Thru Partnering and Licensing

**Barry M. Datlof**

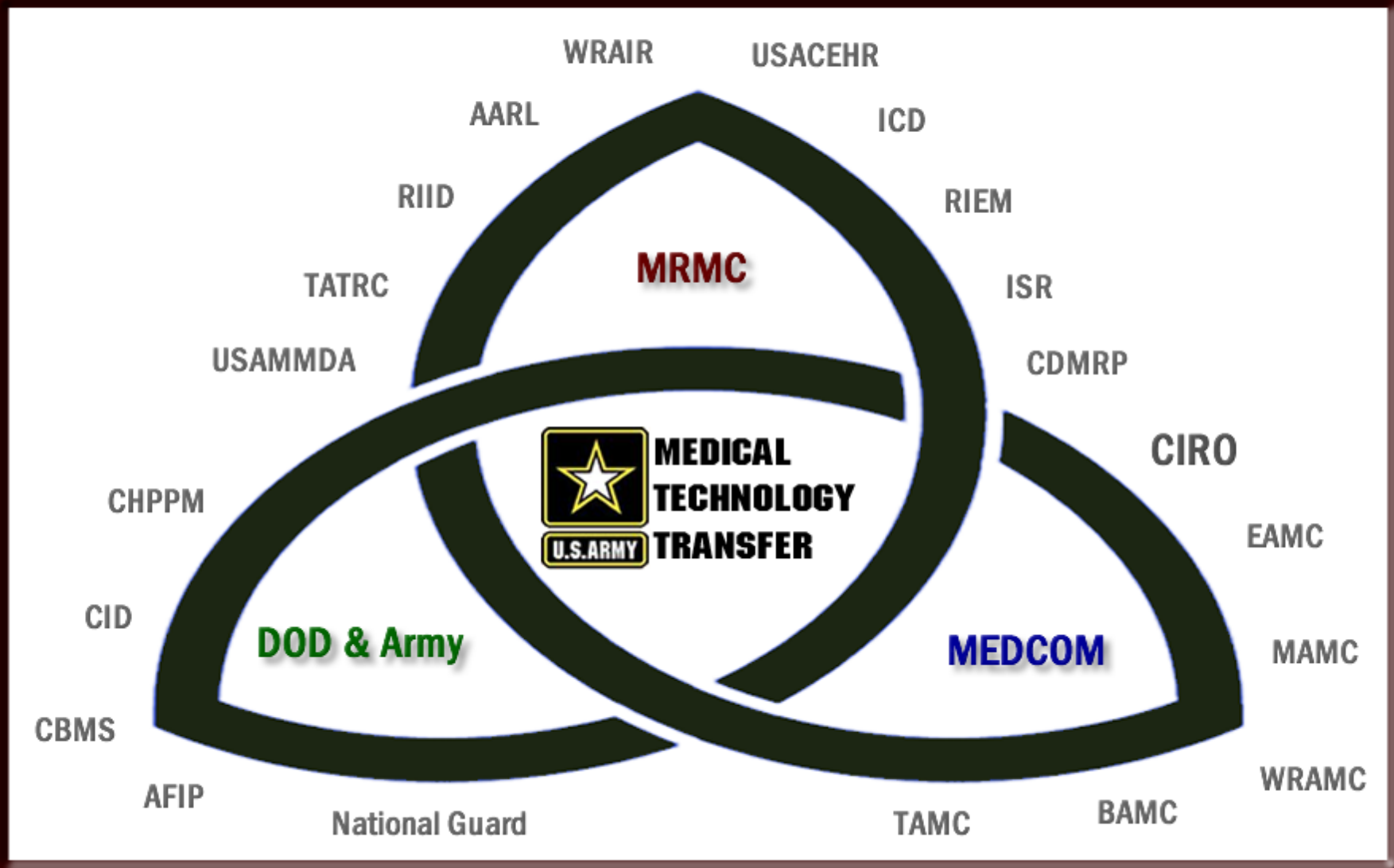
Licensing Officer  
Office of Research and Technology Applications  
U.S. Army Medical Research and Materiel Command  
*Fort Detrick, Maryland*

# Technology Transfer Mission

The exchange of knowledge and materials among cooperating parties for the development and utilization of new products and services



# Medical Technology Transfer Partners



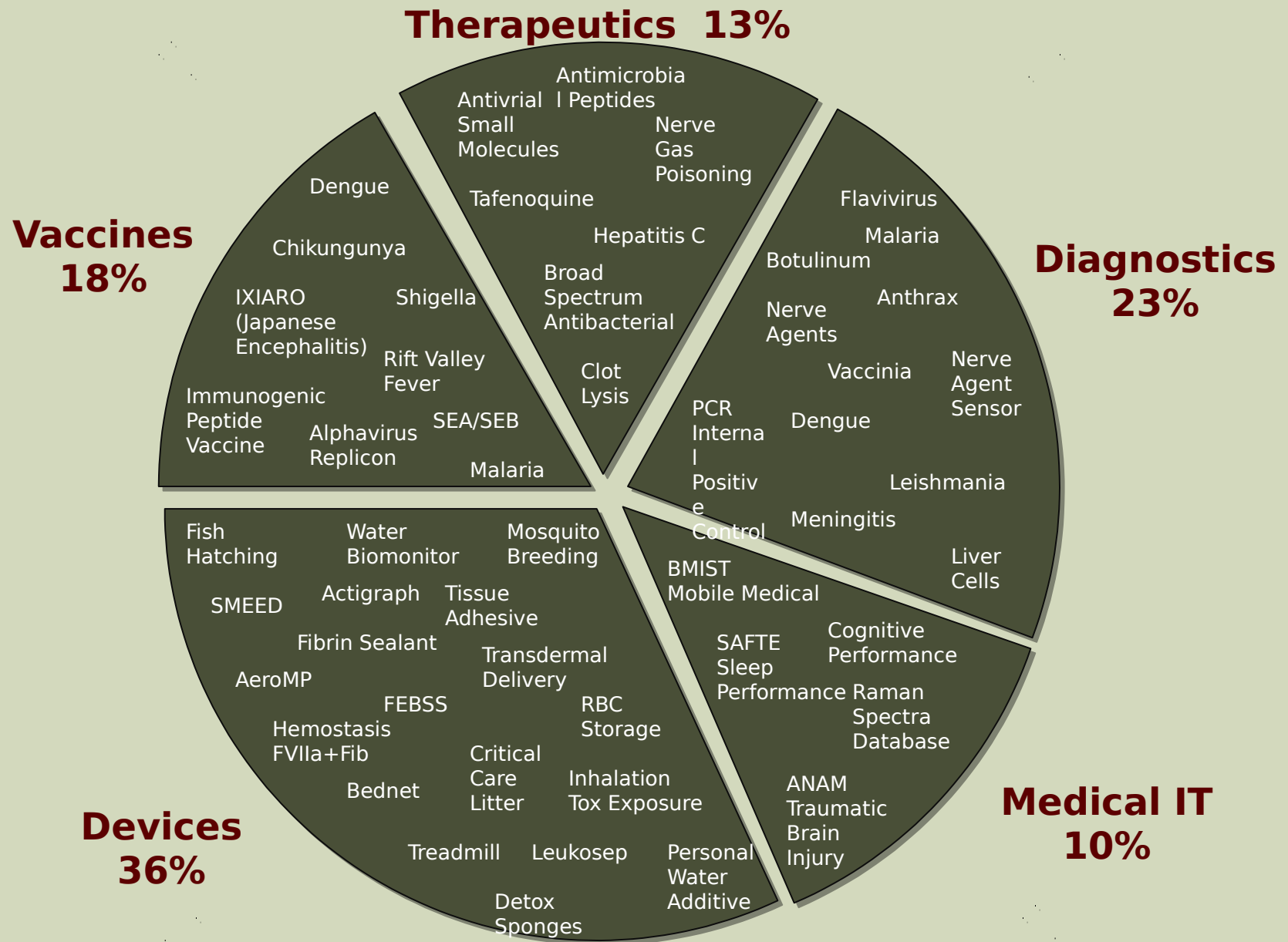
# Many Partners Are Leveraged for Technology Transfer

Industry	Partnership Intermediaries	Government	Not for Profits
<p>Startups &amp; Established Companies</p> <p>Biotech</p> <p>Pharmaceuticals</p> <p>Medical devices</p> <p>Diagnostics</p> <p>Consumer products</p> <p>Military products</p> <p>SBIR/STTR</p> <p>Investors</p> <p>Contract Research Organizations</p> <p>Contract Manufacturers</p>	<p>DOD PIAs</p> <ul style="list-style-type: none"> <li>• Techlink</li> <li>• Miltech</li> <li>• Techmatch</li> <li>• Firstlink</li> <li>• Springboard</li> <li>• T2 Bridge</li> </ul> <p>Maryland TEDCO</p> <p>University of Maryland InvenioIP</p>	<p>Federal Laboratory Consortium</p> <p>OSD</p> <p>HHS</p> <p>Frederick Innovative Technology Center</p> <p>Ft. Detrick Business Development Office</p> <p>UK Research Labs</p>	<p>Tech Transfer</p> <ul style="list-style-type: none"> <li>• AUTM</li> <li>• LES</li> <li>• T2 Society</li> </ul> <p>Tech Council MD</p> <p>Frederick Entrepreneur Council</p> <p>Bio</p> <p>Gates Foundation+</p> <ul style="list-style-type: none"> <li>• Path Foundation</li> <li>• MMV</li> <li>• MVI</li> </ul>

# Technology Transfer Instruments

- **Patent License Agreements (PLAs)**
- **Cooperative Research and Development Agreements (CRADAs)**
- Material transfer agreements
- Clinical trial agreements
- Test and evaluation agreements
- Technical assistant agreements
- Educational partnerships
- Partnership Intermediaries
- Grants, contracts and cooperative agreements

# Licensing Moves A Variety of Products Toward Commercialization



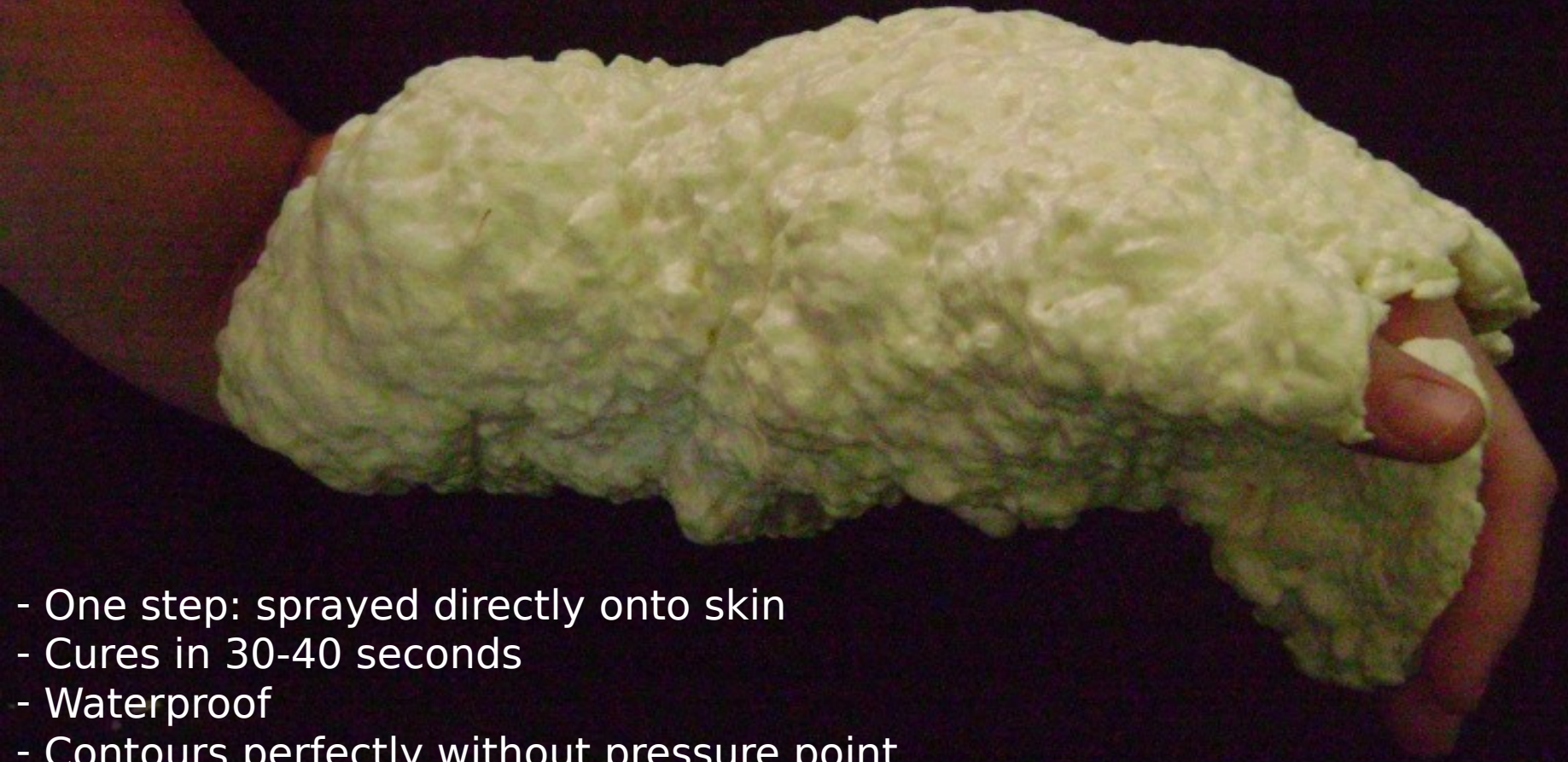


# MRMC Licensed Products Are Sold Worldwide

1. Taqman Internal Positive Control for Polymerase Chain Reaction (PCR) assay (USAMRIID, Cepheid)
2. SMEED™ – Special Medical Emergency Evacuation Device (USAISR, Impact Instrumentation)
3. Nerve Agent Sensor (WRAIR, Agentase)
4. AeroMP – Aerosol Control System (USAMRIID, Biaera Technologies)
5. IAC 1090 – Intelligent Aquatic BioMonitoring System® (USACEHR, Intelligent Automation Corporation)
6. Force Sensing Treadmill (USARIEM, Advanced Mechanical Technology)
7. ANAM® – Automated Neuropsychological Assessment Metrics (MRMC, University of Oklahoma)
8. FEBSS – Field Expedient Bleeding Simulation System (EACH, Skedco)
9. Dengue Virus Monoclonal Antibodies (WRAIR, Chemicon/Millipore)
10. Antibodies against Type A Botulinum Neurotoxin (USAMRIID, Toxin Technology)
11. Bednet – Single Person Portable Bednet for Insect Protection (WRAIR, Iguana and MMI)
12. BMIST/AHLTA Mobile – Mobile Medical Record System (TATRC, Vista Partners)
13. SAFTE® – Sleep Model Determines Individual Readiness Levels (MRMC, Fatigue Sciences)
14. IXIARO® – Japanese Encephalitis Vaccine (WRAIR, Intercell)
15. Diazepam AutoInjector (USAMMDA, Meridian Medical Technologies)
16. Vaccine reagents and screening system (USAMRIID, Integrated BioTherapeutics)
17. Biosurety Program Management Software (USAMRIID, Foxspire)
18. MOES™ – Mobile Obstetrics Emergencies Simulator (CIRO, Gaumard Scientific)
19. Hepatitis C treatment (FAMC, SciClone)

# FastCast™ Available for Licensing

**Spray foam immobilization cast  
for emergency use in the field**



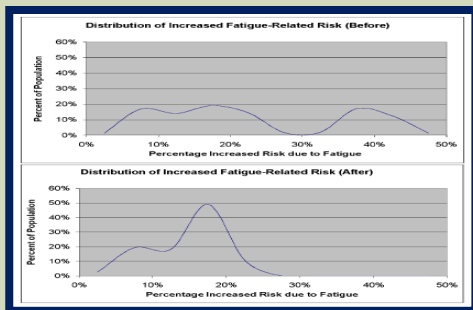
- One step: sprayed directly onto skin
- Cures in 30-40 seconds
- Waterproof
- Contours perfectly without pressure point
- Replaces multiple pieces of medical equipment



# Monitoring Combat Readiness

Developed by US Army and Fatigue Sciences

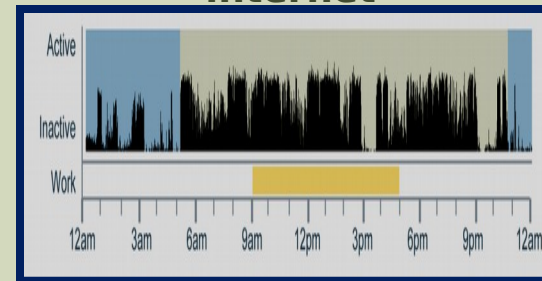
Individual fatigue risk levels are amalgamated into a Group report



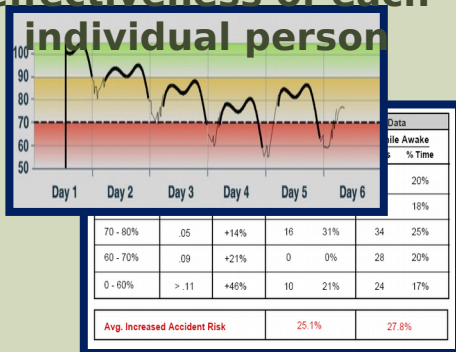
Personnel wear the sleep band that measures wrist



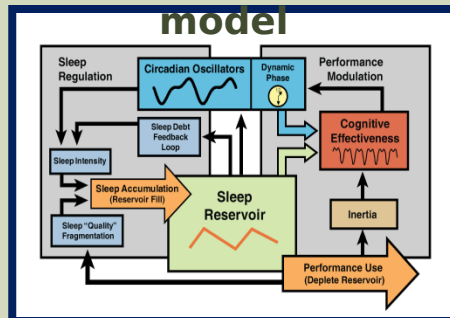
Wrist movements are recorded 24/7 and downloaded over the internet



SAFTE evaluates the fatigue risk and effectiveness of each individual person

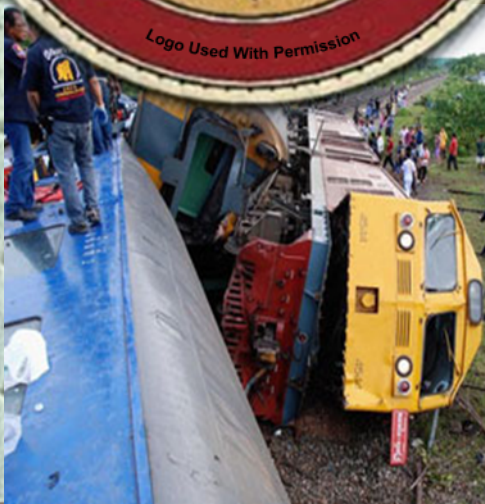
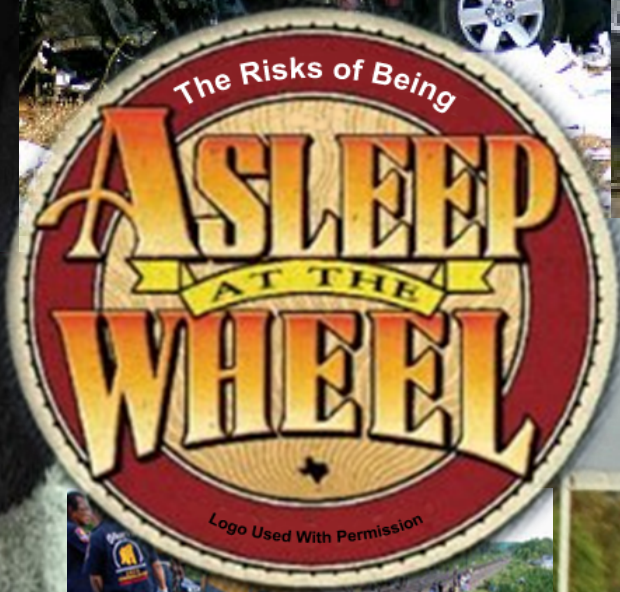
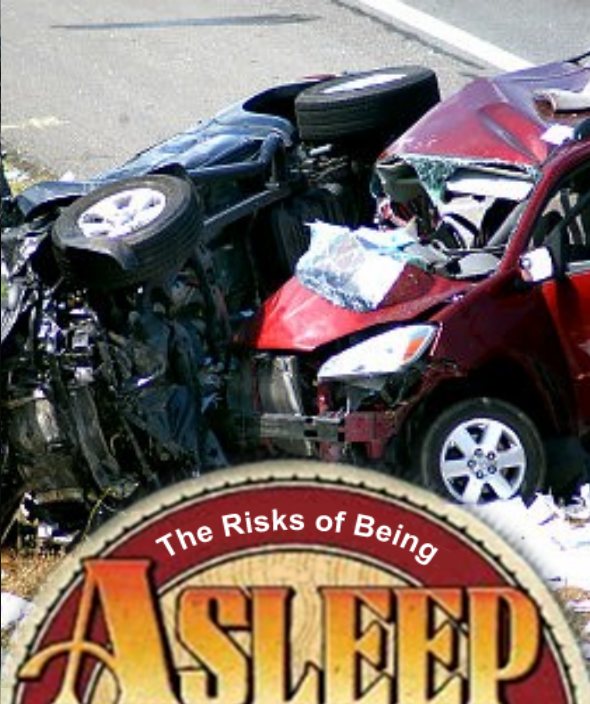


Daily sleep/wake/work times are fed into the SAFTE risk evaluation model



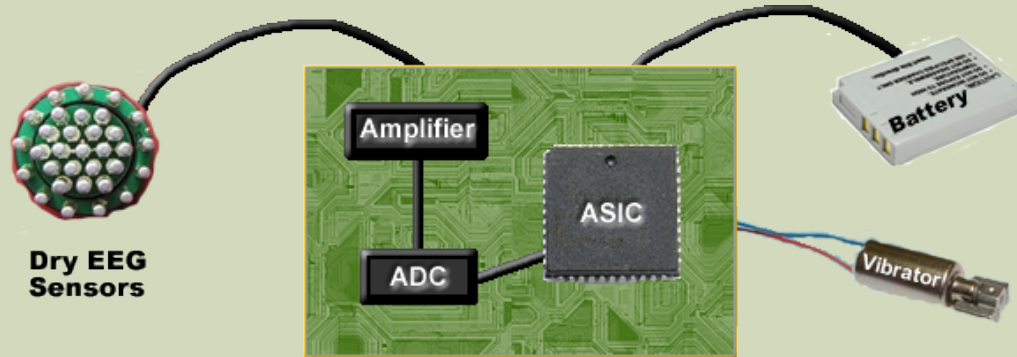
Downloaded data are converted to daily sleep/wake/work times



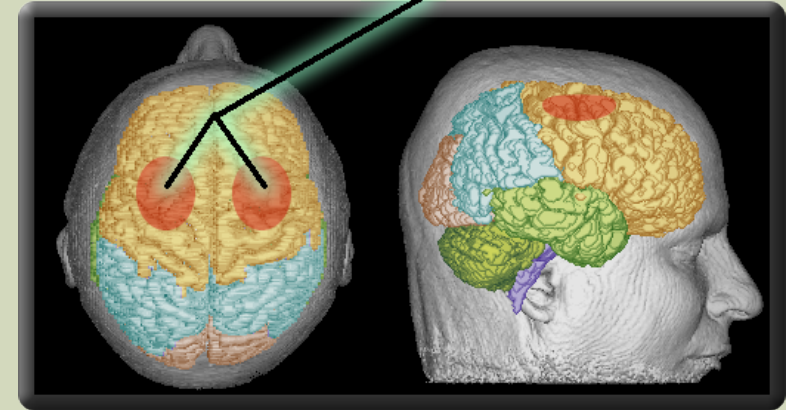




# Solution: AlertCap™ Continuously Monitors EEG Brain Waves and Immediately Sounds An Alarm Before You Lose More Alertness



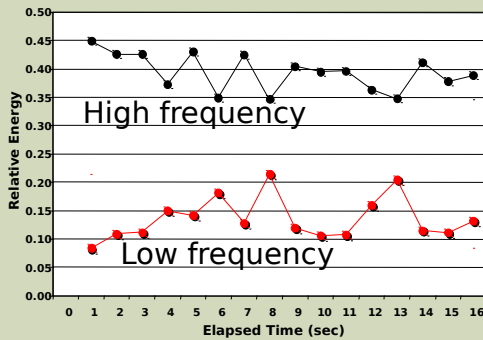
## EEG Monitors the C3/C4 Brain Regions



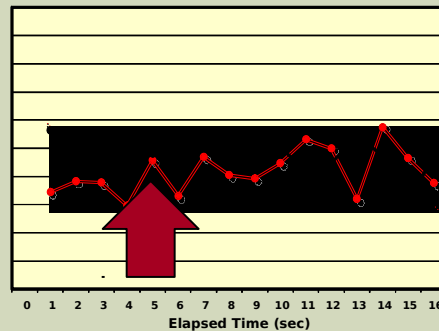
Patent Status:  
Application Pending  
USSN 339,864

## High and Low Frequency EEG Bands

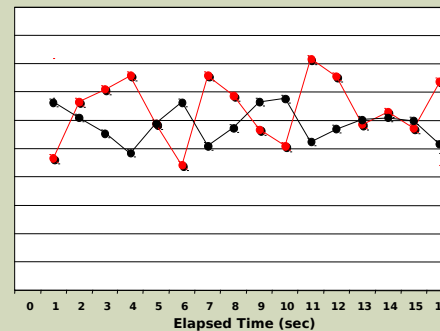
### Awake



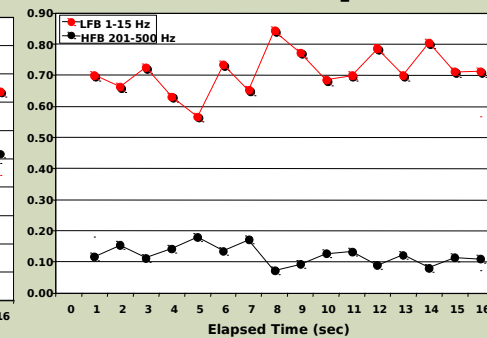
### Neutral



### Drowsy



### Asleep



AlertCap™  
Buzz

Head Nodding

Eyelid Closing

Slower  
Reactive  
Costlier & more  
complicated

# USAMRMC

## Office of Research and Technology Applications



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